

- Clark, G. S., Goodwin, A. J. & Von Meyer, A. P. 1984. Extension of the known range of some seabirds on the coast of southern Chile. *Notornis* 31: 320-334.
- Clark, R. 1986. *Aves de Tierra del Fuego y Cabo de Hornos guía de campo*. Literature of Latin America (L.O.L.A.), Buenos Aires.
- Cubillos, A., Schlatter, R. & Cubillos, V. 1979. Diftero-viruela aviar en torcaza (*Columba araucana*, Lesson) del sur de Chile. *Zentralblatt Veterinärmedizin* B, 26: 430-432.
- Daskam, T. & Rottmann, J. 1984. *Aves de Chile*. Santiago, Chile: Publicaciones Lo Castillo S.A.
- Devillers, P. & Terschuren, J. A. 1977. Some distributional records of migrant North American Charadriiformes in coastal South America (continental Argentina, Falkland, Tierra del Fuego, Chile and Ecuador). *Gerfaut* 67: 107-125.
- Devillers, P. & Terschuren, J. A. 1978. Midsummer seabird distributions in the Chilean fjords. *Gerfaut* 68: 577-588.
- Glade, A. 1977. Notas breves. 2. Observaciones ornitológicas. *Bol. Ornitol., Santiago* 9: 20-21.
- Hellmayr, C. E. 1932. The birds of Chile. *Field Mus. Nat. Hist. Ser.* 308, 19: 1-472.
- Housse, R. R. R. 1924. Apuntes sobre las aves de la Isla la Mocha. *Rev. Chilena Hist. Nat.* 28: 47-54.
- Jehl, J. R. Jr. 1973. The distribution of marine birds in Chilean waters in winter. *Auk* 90: 114-135.
- Johnson, A. W. 1965, 1967. *The Birds of Chile and Adjacent Regions of Argentina, Bolivia and Peru*. 2 vols. Buenos Aires, Argentina: Platt Establ. Gráficos.
- Murphy, R. C. 1936. *Oceanic Birds of South America*. 2 vols. American Museum of Natural History.
- Oyarzo, R. H. & Cekalovic, K. T. 1982. Nuevos registros y localidades para algunas especies de la avifauna chilena. *Bol. Soc. Biol. de Concepción, Chile* 53: 171-172.

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Comments on recently described new species of hermit hummingbirds

by Christoph Hinkelmann

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Since 1966, 11 species of hummingbirds have been described as new to science. Before their validities could be independently evaluated (Mayr & Vuilleumier 1983, Vuilleumier & Mayr 1987), some of them, depending on the date of their description, were included in major ornithological check-lists (e.g. Meyer de Schauensee 1970, Parker *et al.* 1982, Wolters 1975-1982). Four of these new species are placed within the genus *Phaethornis* and 3 in *Threnetes*, both in the hermit subfamily (Phaethornithinae). Because this well-defined group comprises merely c. 10% of the total number of hummingbird species, and because 3 species soon after their discoveries were included in the ICBP Bird Red Data Book (King 1981), it became evident that a careful (re-)examination of all available information on these 7 hermit hummingbirds was highly desirable.

Unfortunately, most of the type specimens are preserved in the Museu de Biologia Prof. Mello Leitão in Santa Teresa, Espírito Santo, Brazil, and therefore are difficult of access (T. A. Parker, H. Sick). Thus, I have been able to examine only one type specimen, *Phaethornis koepckeae* (AMNH). Nevertheless, in this paper I try to evaluate the validity of 7 newly described species of hermit hummingbirds, a study in part stimulated by the recent comments of Vuilleumier & Mayr (1987). Revisions are summarised in Table 2.

Museum acronyms used:—

- AMNH: American Museum of Natural History, New York
 ANSP: The Academy of Natural Sciences of Philadelphia
 CMNH: Carnegie Museum of Natural History, Pittsburgh
 FMNH: Field Museum of Natural History, Chicago
 LSUMZ: Louisiana State University, Museum of Zoology,
 Baton Rouge
 MCZ: Museum of Comparative Zoology, Harvard University,
 Cambridge
 MNRJ: Museu Nacional do Rio de Janeiro
 MZUSP: Museu de Zoologia da Universidade de São Paulo
 NMFS: Naturmuseum und Forschungsinstitut Senckenberg,
 Frankfurt/Main
 UMMZ: University of Michigan, Museum of Zoology, Ann
 Arbor
 ZFMK: Zoologisches Forschungsinstitut und Museum
 Alexander Koenig, Bonn
 ZMK: Zoologisk Museum København
 ZSM: Zoologische Staatssammlung, München

Phaethornis margarettae, KLABIN FARM LONG-TAILED HERMIT OR
 MARGARETTA'S HERMIT

Based on 10 specimens, Ruschi (1972) described this species from a single patch of forest, Klabin Farm, Conceição da Barra, in northern Espírito Santo, Brazil. However, its probable range is much larger, because additional specimens had been overlooked. L. A. P. Gonzaga informs me of the existence of further specimens:

MZUSP No. 63569, ♂, Vicência, Pernambuco, 8.6.1971, coll. by an expedition of the MZUSP;

MNRJ No. 34349, ♀, 17 km W Valença, Bahia, 15.10.1983, coll. Teixeira and Puga;

MNRJ No. 33827, ♂, Pedra Branca, Murici, Alagoas, 3.5.1984, coll. Teixeira.

All 3 specimens are labelled '*Phaethornis superciliosus*'. Recently, Teixeira *et al.* (1987) reported that the last mentioned specimen represents a noticeable range extension of the species. In addition, D. M. Teixeira informs me that in January 1987 he collected 3 additional specimens (2♂♂, 1♀, MNRJ Nos. 34939–34941) of '*P. superciliosus*' in 'Serra Branca' (= Pedra Branca), Murici, Alagoas, "where it is a rather common bird". Also, I found 2 specimens in the MCZ collection (Nos. 28323,

28324), determined as *Phaethornis superciliosus muelleri* from 'Pernambuco' (no collector, no date, purchased from W. J. Knowlton in March 1880). Ruschi (1973c) reported the species from the Rio Mucuri, S Bahia, and King (1981) mentioned a sight record of a hermit hummingbird in the Sooretama Biological Reserve, Espirito Santo, by R. S. Ridgely, that could have been *P. margarettae*.

Although their geographic ranges are separated by at least 2000 km, morphologically '*P. margarettae*' closely approaches the *P. superciliosus/malaris* species group from Amazonia. In this group Zimmer (1950) regarded all but one of the many subspecies usually considered conspecific with *P. superciliosus* as forms of *P. malaris*, which was, in contrast, considered monotypic by Peters (1945). However, for the most recent taxonomic treatment see Eisenmann in Meyer de Schauensee (1966).

Within this controversial species group, '*P. margarettae*' appears to be indistinguishable both in colouration and size from *P. malaris insignis*, found south of the Amazon between the lower Rios Tapajós and Madeira—a colour plate is given in Ruschi (1982) and a colour photograph in Ruschi (1986). Ruschi (1972) stated that he had compared the type series with examples of *P. malaris* (*sensu* Zimmer 1950), but it is evident that he examined only birds of the nominate subspecies from French Guiana and Amapá, Brazil, which are distinctly larger and darker in colouration than *P. malaris insignis* and the other subspecies of South America.

Ruschi (1972, 1973c) considered '*P. margarettae*' to be a bird of primary rain forest, a vegetation type once bordering the coast of southeastern Brazil for several thousand kilometres. T. A. Parker tells me he assumes that '*P. margarettae*' inhabits the coastal lowlands and is thus separated from its ecological counterpart of higher elevations, *P. eurynome*. The latter species occurs mainly in forests above 800 m in the northern parts of its range (states of Rio de Janeiro, Espirito Santo, S Bahia). Regrettably, the coastal rain forests of SE Brazil are nearly completely destroyed. Collar (1987) recently reported that "the Klabin Farm Long-tailed Hermit, endemic to the forest, is almost certainly gone (if it ever existed: perhaps it was not a valid species)".

Zoogeographically, '*P. margarettae*' provides a puzzling problem. Assuming that a connection may have once existed between the lowland forests of southeastern Brazil and Amazonia, the contact zone should have been in Maranhão and E Pará (T. A. Parker), where, in fact, the rain forest areas are inhabited by *P. superciliosus muelleri*, a taxon clearly distinct from both *insignis* and *margarettae*. (Based mainly on the colouration of the under tail-coverts and the rectrices' margins, I consider *muelleri* to be conspecific with nominate *superciliosus*, whereas *insignis* is more closely related to *P. malaris*.) Thus, the present range of *P. superciliosus muelleri* 'interrupts' the possible connection between the actual distribution of *P. malaris insignis* and '*P. margarettae*'. Grantsau (in Vuilleumier & Mayr 1987) "would place the species [*margarettae*] in the polytypic species *P. mulleri* (sic), as *P. mulleri* (sic) *margarettae*". Gonzaga *et al.* (MS) stressed that "*P. margarettae* . . . is at best a subspecies of *P. superciliosus*" (*sensu* Peters 1945). I agree in considering *margarettae* a subspecies of the *P. superciliosus/malaris* species group but prefer to treat it as *P. malaris*

margarettae until further information concerning its relationship to *P. malaris insignis* is available.

Phaethornis nigrirostris, BLACK-BILLED HERMIT

The description of *Phaethornis nigrirostris* by Ruschi (1973a) is based on a single bird from the Nova Lombardia Reserve, Espirito Santo, Brazil, in which only size differences and 5 morphological characters distinguish it from *P. eurynome*, the most important difference being the uniform black colouration of the bill. T. A. Parker, who was able to examine the type specimen in Santa Teresa, informed me that the mandible now exhibits traces of yellow and has probably never been completely dark. These traces of yellow, however, are not noticeable on the colour photographs accompanying the description of the species (Ruschi 1973a, 1982, 1986). The size and the colouration of the breast in *P. eurynome* are rather variable (probably due to age and sex). The other 3 morphological characters given by Ruschi (1973a) are of equally dubious value: these are a broader base to the bill, a lighter chin and throat, and green instead of bronze upperparts. These characters, however, commonly occur in *P. eurynome* as well. Differences in size are virtually non-existent: Ruschi's (1973a) measurements of total length (155 mm), tail length (62 mm) and weight (5 g) are all within the range of *P. eurynome*. "*P. nigrirostris*" does apparently differ from *P. eurynome* in wing length, but this character should be rechecked; unfortunately, a photograph of the type specimen beneath a mm scale (Ruschi 1973a) is not sufficiently clear to allow a precise measurement.

Accompanied by R. S. Ridgely, Sick (1979) observed a single Black-billed Hermit in the Nova Lombardia Reserve, recognizing it at once by its dark mandible. Based on this trip, Ridgely informed King (1981) that "*P. nigrirostris*" is outnumbered in its only known locality by *P. eurynome*. During a stay in the Nova Lombardia Reserve in September 1987, T. A. Parker found only typical *P. eurynome*. Obviously, neither habitat nor altitudinal segregation is evident between these "species" such as would be expected for closely related species of similar size. Even Ruschi (1973a, 1973d, 1982) stated that both share the same environment. (For habitat requirement of *P. eurynome* see, e.g. Scott & Brooke 1985, Snow & Snow 1986.)

Grantsau (in Mayr & Vuilleumier 1983 and in Vuilleumier & Mayr 1987) was the first to consider that the 2 'species' were in fact one, regarding "*P. nigrirostris*" as a young *P. eurynome*. However, examination of young specimens of *P. eurynome* (e.g. AMNH No. 188924) reveals at once that there is a sharp contrast between the light-coloured, primarily yellow base to the mandible and its dark tip. Thus, I consider "*P. nigrirostris*" to represent aberrant black-billed individuals occurring within the *P. eurynome* population in the Nova Lombardia Reserve, Espirito Santo, Brazil.

It is worth noting that Mayr & Vuilleumier (1983) indicate that the type specimen was alive when Ruschi originally described it. Ruschi (1973a), however, added to his description 2 photographs showing the unique individual of "*P. nigrirostris*" known at that time; one displays the living

bird, but the second is of a study skin compared with a specimen of *P. eurynome*.

Phaethornis koepckeae, KOEPCKE'S HERMIT

Phaethornis koepckeae is the only non-Brazilian hummingbird treated in this paper. Endemic to Peru, it was found first in the Cerros del Sira, Dpto. Huánuco, and then in the Río Marañon Valley, Dpto. Amazonas (Weske & Terborgh 1977). Today, *P. koepckeae* is known from 10 localities along the eastern margin of the eastern Andes between the Dptos of Amazonas and Madre de Dios (Davis 1986; unpublished museum specimens in FMNH, Río Palotoa, 12 km from mouth, Madre de Dios, and LSUMZ, 30 km SW Puerto Bermudez, Pasco; a map showing all localities is given by Hinkelmann 1987).

Due to important fieldwork conducted by parties of the FMNH and the LSUMZ, much new information is now available since the original description. At present there are at least 72 study skins extant, collected between 1969 and 1985 (FMNH: 37; LSUMZ: 30; AMNH: 3, including the type; ZFMK: 1, ZMK: 1). Thus, careful comparison can be made of morphological variation between *P. koepckeae* and its closest relative, *P. philippii*. Both species have a straight bill, and as stated by Weske & Terborgh (1977), they can be distinguished by the colouration of the face, throat and breast. *P. philippii* has a uniform, rich rufescent-buff throat and sides of neck, whereas *P. koepckeae* has the medial throat area white, the moustachial streak whitish, and the lateral throat area and sides of neck buffy-grey. In all these latter characters *P. koepckeae* is strikingly similar to *P. syrmatophorus columbianus*, a hummingbird clearly distinguished, however, by its strongly curved bill as well as by differences in colouration. *P. philippii* and *P. koepckeae* also differ from each other in size (see Table 1): *P. koepckeae* is slightly larger in all linear measurements than *P. philippii*, as suggested by Weske & Terborgh (1977) on the basis of 8 specimens only. However, Vuilleumier & Mayr (1987) indicated the contrary without providing any data for their conclusion. *P. koepckeae* is also slightly heavier than *P. philippii*.

P. koepckeae inhabits humid (lower) montane forests of the foothills along the eastern Andes in Peru at altitudes between c. 275 m (c. 900 ft, LSUMZ No. 75140) and 1075 m (FMNH no. 320596) (Davis 1986). Weske & Terborgh (1977) reported observations up to 1130 m, and estimated the main altitudinal distribution as 700–1000 m; but study skins at the FMNH indicate that the species is fairly common even below 700 m. In contrast, *P. philippii* is primarily a lowland, tropical zone species; it was found between 100 m (LSUMZ Nos. 114671–77, 114679–80) and 325 m (LSUMZ)—a large series collected in extreme northwestern Bolivia near Cobja, Dpto. of Pando (Parker & Remsen 1987).

Vuilleumier & Mayr (1987) treated *P. philippii* and *P. koepckeae* as allospecies. Undeniably, *P. philippii* is the nearest existing ally of *P. koepckeae*; the differences in size, colouration and habitat preferences, however, are equivalent to those between other closely related congeners, e.g., *P. superciliosus/malaris* and *P. syrmatophorus*, that are not treated as allospecies. Thus, I agree with Fitzpatrick (in Vuilleumier & Mayr 1987) in considering *P. koepckeae* a full species.

TABLE 1.

Measurements (mm, g) of *Phaethornis koepckeae* compared to those of *Phaethornis philippii*
 Mean \pm standard deviation biased (number of specimens examined) (range)

	<i>Phaethornis philippii</i>	<i>Phaethornis koepckeae</i>
♂ Bill length	34.65 \pm 1.29 (55) (31.5–37.5)	37.44 \pm 1.14 (39) (33–39.5)
♀ Bill length	31.55 \pm 1.20 (43) (29–34.5)	34.48 \pm 0.83 (32) (33–36)
♂ Wing length	62.57 \pm 1.60 (56) (59–66)	66.88 \pm 2.08 (16) (63–70) (from Tarapoto, San Martín) 62.93 \pm 1.43 (22) (61–67) (from all other localities)
♀ Wing length	57.02 \pm 1.42 (44) (54–60)	62.56 \pm 1.01 (9) (61–64) (from Tarapoto, San Martín) 57.57 \pm 1.29 (23) (55–61) (from all other localities)
♂ Body mass	4.84 \pm 0.38 (31) (4.2–6.0)	5.25 \pm 0.30 (37) (4.5–5.8)
♀ Body mass	4.19 \pm 0.37 (17) (3.5–5.0)	4.69 \pm 0.31 (28) (4.0–5.5)

All measurements were taken from museum specimens made available to me by: AMNH, ANSP, CMNH, FMNH, LSUMZ, NMFS, UMMZ, ZFMK, ZMK, and ZSM. Weights were taken from freshly collected specimens as indicated on their labels in: FMNH, LSUMZ, AMNH, and ZFMK.

Confirmation by U-tests: bill length, ♂: $Z=7.31$, $p<0.01$; bill length, ♀: $Z=7.02$, $p<0.01$; wing length, ♂: $Z=3.58$, $p<0.01$; wing length, ♀: $Z=3.20$, $p<0.01$.

Phaethornis maranhaoensis, MARANHÃO HERMIT

In another paper (Hinkelmann 1988) I have evaluated the characters used by Grantsau (1968) to separate "*P. maranhaoensis*" from its closest relatives, and I conclude that *maranhaoensis* is merely the previously undescribed adult male plumage of *P. nattereri*. Grantsau (1968) had based the description of "*P. maranhaoensis*" on 9 adult males. Vuilleumier & Mayr (1987), based on a comment from Grantsau, indicated that "there are now 9 specimens of this species". Thus no additional specimens have been collected since the time of the original description.

Threnetes grzimeki, BLACK BARBTHROAT OR GRZIMEK'S BARBTHROAT

While making an inventory of birds of the isolated patch of forest belonging to Fazenda Klabin near Conceição da Barra, Espírito Santo, Brazil, Ruschi (1973b) found a bird that he described as a new species, *Threnetes grzimeki*. The description is based on a male (type) and 3 females from the type locality where "*Phaethornis margarettae*" was found for the first time as well (Ruschi 1972). Ruschi (1973b) indicated that he had compared "*T. grzimeki*" with the other species of that genus but had found only slight similarities. "*T. grzimeki*" is said to differ by the colouration of the tail, a remarkable portion of every rectrix, including the rachis, bearing chestnut reddish colouration. Besides, the dark throat of "*T. grzimeki*" is less well defined than that of other species of this genus and its under tail-coverts are not iridescent, whereas *Threnetes* is generally characterized by its brilliant green under tail-coverts. Thus, although Ruschi (1973b) recognized the resemblance of "*T. grzimeki*" to *Glaucis* ("que essa n.sp. mais se assemelha a uma espécie de Genero *Glaucis*"), he preferred its

placement in *Threnetes* due to the dark throat as well as to the absence of serration in the maxilla.

Careful examination of these characters reveals at once a remarkable similarity between "*T. grzimeki*" and young *Glaucis hirsuta*. Immature individuals of *G. hirsuta* are characterized by a dark throat that contrasts with the lighter breast, thus resembling *Threnetes*, and by the absence of serration in the maxilla. Adult *Glaucis hirsuta* do not exhibit a contrasting colouration of the throat, whereas their maxillas develop a serrated ventral surface. The colours of the tail and the under tail-coverts, the other distinguishing characters of "*T. grzimeki*", are identical with those of *Glaucis hirsuta*. Strong support that "*T. grzimeki*" is merely the immature plumage of *Glaucis hirsuta* is, in fact, given by Ruschi (1973b) himself. White tips to the rectrices, 5 mm long, clearly indicate an immature bird, whereas adult *Glaucis hirsuta* and *Threnetes* spp. have distinctly shorter white tips. Furthermore, the curved bill of "*T. grzimeki*" portrayed by Ruschi (1973b; the scale given in the lower part of the drawing, indicating a bill length of 5 mm, is erroneous) differs strikingly from that of *Threnetes* spp. but is similar to that of *Glaucis hirsuta*. Light tips to the primaries, secondaries and wing-coverts would clearly indicate a young bird, but Ruschi (1973b) did not mention these tips nor are they visible in the colour plate (Ruschi 1982) or colour photograph (Ruschi 1986). L. A. P. Gonzaga, however, informs me that the type specimens of "*T. grzimeki*" do not fit their description well in that they show a "scaled appearance of the upperparts".

Since its first description, additional observations of "*Threnetes grzimeki*" have been recorded from Mucurí (Ruschi 1982) and the Sooretama Biological Reserve (King 1981), both in the state of Espírito Santo. More recent investigations in the latter reserve, however, confirmed the presence of *Glaucis hirsuta* but gave no indications of "*T. grzimeki*" (Scott & Brooke 1985). The nest of "*T. grzimeki*" is said to be "identical to that of the species of the genera *Glaucis* and *Rhamphodon*, which live in the same forest" (Ruschi 1982). Whereas *Glaucis hirsuta* is a common species in SE Brazil, the geographically nearest species of *Threnetes*, *T. leucurus*, inhabits riverine forest in the Amazon Basin, c. 2300 km distant across habitat unsuitable for *T. leucurus*, though *G. hirsuta* has a wider tolerance.

Grantsau (in Mayr & Vuilleumier 1983 and in Vuilleumier & Mayr 1987) regarded "*T. grzimeki*" as a young *Glaucis hirsuta* but provided no support for this suggestion. Vielliard (in litt.) also doubted the validity of "*T. grzimeki*" and has presented spectrograms exhibiting different types of song in *Glaucis hirsuta* and a nearly indistinguishable song of "*T. grzimeki*" (Vielliard in Ruschi 1986).

In summary, I agree with Grantsau (in Vuilleumier & Mayr 1987) and Gonzaga *et al.* (MS) in regarding "*Threnetes grzimeki*" as the immature plumage of *Glaucis hirsuta*.

Threnetes loehkeni, LOEHNEN'S BARBTHROAT

Grantsau (1969) described *Threnetes loehkeni* from 5 males and 1 female from Serra do Navio, Amapá, Brazil, as being clearly distinguishable from *Threnetes leucurus*, a widely distributed species in the Amazonian lowlands. *T. leucurus* is recorded both from Surinam (*T. l. leucurus*) and

eastern Pará, Brazil (*T. l. medianus*; a single specimen from this subspecies, identical to specimens from the vicinity of Belém, Pará, was recorded from Cajari River, Amapá, at c. 200 km south of Serra do Navio—Ruschi 1957). Thus, *T. leucurus* 'surrounds' the probable range of *T. loehkeni*.

The characters given by Grantsau (1969) to distinguish Loehken's Barbthroat from *T. leucurus*, the nearest ally within the genus, are few. Colouration patterns in general are quite similar though less distinct in "*T. loehkeni*". The most diagnostic feature given is the tail colour: *T. leucurus* has the major parts of the rectrices white to pastel-coloured, whereas these are nearly totally dark in "*T. loehkeni*". Grantsau (1969) added a colour plate to illustrate these differences and a colour photograph is published by Ruschi (1986).

In New York I had the opportunity to compare 3 specimens of "*T. loehkeni*" (AMNH Nos. 825213–15) with all subspecies of *T. leucurus*. The 3 specimens, collected by Grantsau in Serra do Navio in 1969, have nearly completely dark rectrices with pastel-coloured tips; 2 males (AMNH Nos. 825213–14) exhibit light grey coloured parts near the feather's base as well, a character not mentioned by Grantsau (1969) and of interest because even young *T. leucurus* show some white or pastel-coloured tinge in the same area, the amount of this colouration increasing with age. However, the colouration of the tail is the most variable character in *T. leucurus*. In general, the colouration of the 3 specimens of "*T. loehkeni*" does not go beyond the variation found in all subspecies of *T. leucurus*, variation which is probably due to age and sex.

According to Grantsau (in Vuilleumier & Mayr 1987), "the adult male *loehkeni* is the only *Threnetes* without a black breast". This is not, however, completely true: one adult male (AMNH No. 825213) has the same dark green iridescent colour as other adult male *Threnetes*, yet this colouration does not appear as a single patch but broken up by lighter feather bases. In male *T. leucurus* the amount of the dark green breast colour seems to increase with age. If so, compared to fully adult male *T. leucurus*, either the males of "*T. loehkeni*" presently known are younger, or development to the final breast colour of male *T. leucurus* does not occur in *loehkeni*.

Novaes (1974) and L. A. P. Gonzaga, who examined paratypes in the MNRJ, regard "*T. loehkeni*" as a subspecies of *T. leucurus*, as also does Pinto (1978). Recently, Grantsau (in Vuilleumier & Mayr 1987), contradicting his assessment of the breast colour in adult male *loehkeni*, regarded *Threnetes niger freirei* as the adult of "*T. loehkeni*". *T. niger freirei* was described by Ruschi (1976) from Serra do Navio, Amapá, as well. It has a completely dark green iridescent plumage, according to photographs (Ruschi 1976, 1986). However, until more recently collected *Threnetes* specimens are available from Amapá, Brazil, and from French Guiana, the taxonomic affinities between *T. niger* and *T. leucurus* remain obscure, and the best treatment of *loehkeni* for the present is as a distinctive subspecies of *T. leucurus*.

Threnetes cristinae, BRONZE BARBTHROAT

Based on a single adult male, Ruschi (1975) described *Threnetes cristinae* from Serra do Navio, Amapá, Brazil, which is also the type locality of

"*T. loehkeni*" (Grantsau 1969). Ruschi (1975) compared both 'species' and stated that "*T. cristinae*" is much darker overall, and that there are some slight differences in the facial patterns. Furthermore, "*T. cristinae*" is said to have cinnamonaceous rather than light ochraceous underparts. The unique type specimen of "*T. cristinae*" is portrayed in a colour photograph by Ruschi (1986).

Considering the intraspecific variability within *T. leucurus*, the slight differences in the measurements of "*T. cristinae*", emphasised by Ruschi (1975), are virtually meaningless. Such variation is probably due to age, sex, and individual variation. The differences in colour between "*T. loehkeni*" and "*T. cristinae*" are probably also due to such variation. Differences in the body masses ("*T. loehkeni*", ♂: 5 g, Grantsau 1969; "*T. cristinae*", ♂: 7 g, Ruschi 1975) are probably measurement artifacts. That "*T. cristinae*" shares the same habitat with "*T. loehkeni*" (Ruschi 1975) confirms, in my opinion, that "*T. cristinae*" is a synonym of "*T. loehkeni*", because the sympatric existence of such closely related forms as full species appears unlikely.

Mayr & Vuilleumier (1983) stated that "it seems likely that *T. cristinae* is a synonym of *Threnetes* (?*leucurus*) *loehkeni* . . . but further material is obviously needed before a final decision can be made". Grantsau (*in* Vuilleumier & Mayr 1987) "believes that *T. cristinae* is the immature of *T. loehkeni*" regardless of the fact that the description of "*T. cristinae*" is based on an adult male. Even so, the comparison of a subadult individual (e.g., AMNH No. 825215, "*T. loehkeni*") with the characters given by Ruschi (1975) indicates that "*T. cristinae*" could not be an immature *loehkeni*. Immature *Threnetes* spp. are recognized by light tips to the primaries and secondaries, which are not mentioned by Ruschi (1975). Besides, the type of "*T. cristinae*" is said to have a light rosy band between the dark throat and the breast, the latter having the same colour as the upperparts (Ruschi 1975). In contrast, immature "*T. loehkeni*" have an ochraceous colouration, that could not be described as a band, between the browner throat (lighter than in adults) and the breast, which is

TABLE 2

Taxonomic recommendations for 7 recently described new species of hummingbirds

The taxon described as:	should be regarded as:
<i>Phaethornis maranhaoensis</i> Grantsau, 1968	<i>Phaethornis nattereri</i> Berlepsch, 1887
<i>Threnetes loehkeni</i> Grantsau, 1969	<i>Threnetes leucurus loehkeni</i> (Grantsau, 1969)
<i>Phaethornis margarettae</i> Ruschi, 1972	<i>Phaethornis malaris margarettae</i> (Ruschi, 1972)
<i>Phaethornis nigrivirostris</i> Ruschi, 1973	<i>Phaethornis eurynome eurynome</i> (Lesson, 1832)
<i>Therenetes grzimeki</i> Ruschi, 1973	<i>Glaucis hirsuta hirsuta</i> (Gmelin, 1788)
<i>Threnetes cristinae</i> Ruschi, 1975	<i>Threnetes leucurus loehkeni</i> (Grantsau, 1969)
<i>Phaethornis koepckeae</i> Weske & Terborgh, 1977	<i>Phaethornis koepckeae</i> Weske & Terborgh, 1977

ochraceous and flecked with iridescent feather tips. In general, the colour contrast on the underparts is less distinct in immature than in adult individuals.

L. A. P. Gonzaga, who had access to the type specimen, informed me that "*T. cristinae* seems [to be] identical to *T. loehkeni*, which, in turn, must be a subspecies of *T. leucurus* . . .". Thus, there remains little doubt that "*T. cristinae*" is merely a synonym of *Threnetes leucurus loehkeni*.

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References:

- Collar, N. J. 1987. Red Data Bird Hook-billed Hermit. *World Birdwatch* 9 (No. 1): 5.
- Davis, T. J. 1986. Distribution and natural history of some birds from the Departments of San Martin and Amazonas, northern Peru. *Condor* 88: 50-56.
- Gonzaga, L. A. P., Scott, D. A. & Collar, N. J. MS. The status of birds of some forest fragments in eastern Brazil. Report on a survey supported by CVRD, October 1986.
- Grantsau, R. 1968. Uma nova espécie de *Phaethornis* (Aves, Trochilidae) (sic). *Pap. Avuls. Zool.* 22: 57-59.
- Grantsau, R. 1969. Uma nova espécie de *Threnetes* (Aves, Trochilidae). *Pap. Avuls. Zool.* 22: 245-247.
- Hinkelmann, C. 1987. Neu beschriebene Kolibriarten. *Trochilus* 8: 93-99.
- Hinkelmann, C. 1988. On the identity of *Phaethornis maranhaoensis* Grantsau, 1968 (Trochilidae). *Bull. Brit. Orn. Cl.* 108: 14-18.
- King, W. B. 1981. *Endangered Birds of the World*. The ICBP Bird Red Data Book. Washington, D.C.
- Mayr, E. & Vuilleumier, F. 1983. New species of birds described from 1966 to 1975. *J. Orn.* 124: 217-232.
- Meyer de Schauensee, R. 1966. *The Species of Birds of South America and their Distribution*. Narberth, PA.
- Meyer de Schauensee, R. 1970. *A Guide to the Birds of South America*. Wynnewood, PA.
- Novaes, F. C. 1974. Ornitologia do Território do Amapá. I. *Publ. Avuls. Museu Paraense Emilio Goeldi* No. 25.
- Parker, T. A. III, Parker, S. A. & Plenge, M. A. 1982. *An Annotated Check-list of Peruvian Birds*. Vermillion, SD.
- Parker, T. A. & Rensen, J. V. Jr. 1987. Fifty-two Amazonian bird species new to Bolivia. *Bull. Brit. Orn. Cl.* 107: 94-107.
- Peters, J. L. 1945. *Check-list of Birds of the World*. Vol. 5. Cambridge, Mass.
- Pinto, O. 1978. *Novo Catálogo das Aves do Brasil*. São Paulo.
- Ruschi, A. 1957. A trochilifauna do rio Cajari no Território do Amapá. *Bol. Mus. Biol. Prof. Mello Leitão Biol.* No. 19.
- Ruschi, A. 1972. Uma nova espécie de Beija-flor do E. E. Santo. *Phaethornis margarettae*—Ruschi. *Bol. Mus. Biol. Prof. Mello Leitão Ser. Zool.* No. 35.

- Ruschi, A. 1973a. Uma nova espécie de Beija-flor do E. E. Santo. *Phaethornis nigrirostris* Ruschi. *Bol. Mus. Biol. Prof. Mello Leitão Ser. Zool.* No. 36.
- Ruschi, A. 1973b. Uma nova espécie de *Threnetes* (Aves, Trochilidae). *Bol. Mus. Biol. Prof. Mello Leitão Ser. Zool.* No. 37.
- Ruschi, A. 1973c. Algumas observações sobre: *Phaethornis margarettae* Ruschi, 1972. *Bol. Mus. Biol. Prof. Mello Leitão Ser. Zool.* No. 38.
- Ruschi, A. 1973d. Algumas observações sobre: *Phaethornis nigrirostris* (sic) Ruschi, 1973. *Bol. Mus. Biol. Prof. Mello Leitão Ser. Zool.* No. 39.
- Ruschi, A. 1975. *Threnetes cristinae* n.sp. *Bol. Mus. Biol. Prof. Mello Leitão Ser. Zool.* No. 83.
- Ruschi, A. 1976. Beija-flores do Amapá com a descrição de uma nova subespécie. *Threnetes niger freirei* n.subsp. *Bol. Mus. Biol. Prof. Mello Leitão Ser. Zool.* No. 84.
- Ruschi, A. 1982. *Beija-flores do Estado do Espírito Santo*. São Paulo.
- Ruschi, A. 1986. *Aves do Brasil*. Vol. 4. Beija-flores. Rio de Janeiro.
- Scott, D. A. & Brooke, M. de L. 1985. The endangered avifauna of southeastern Brazil: a report on the BOU/WWF expeditions of 1980/81 and 1981/82. Pp. 115–139 in A. W. Diamond & T. E. Lovejoy (Eds). *Conservation of tropical forest birds*. ICBP Techn. Publ. No. 4.
- Sick, H. 1979. Notes on some Brazilian birds. *Bull. Brit. Orn. Cl.* 99: 115–120.
- Snow, D. W. & Snow, B. K. 1986. Feeding ecology of hummingbirds in the Serra do Mar, southeastern Brazil. *Hornero* 12: 286–296.
- Teixeira, D. M., Nacinovic, J. B. & Pontual, F. B. 1987. Notes on some birds of north-eastern Brazil (2). *Bull. Brit. Orn. Cl.* 107: 151–157.
- Vuilleumier, F. & Mayr, E. 1987. New species of birds described from 1976 to 1980. *J. Orn.* 128: 137–150.
- Weske, J. S. & Terborgh, J. W. 1977. *Phaethornis koepckeae*, a new species of hummingbird from Peru. *Condor* 79: 143–147.
- Wolters, H. E. 1975–1982. *Die Vogelarten der Erde*. Hamburg and Berlin.
- Zimmer, J. T. 1950. Studies of Peruvian birds. No. 55. The humming-bird genera *Doryfera*, *Glaucis*, *Threnetes*, and *Phaethornis*. *Amer. Mus. Novit.* No. 1449.

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Relationships in the *Campethera notata*, *C. abingoni* and *C. (a.) mombassica* complex of the Afrotropics

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The African savanna woodland woodpeckers of the *Campethera notata* (Lichtenstein) group are widely distributed to the north, east and south of the Upper and Lower Guinea Forests, but are on the whole sparse and local in the north of their range. This is seen as due to a measure of competition with the sympatric Nubian Woodpecker *C. nubica* (Boddaert), and forms of the *C. notata* group are only numerous and widespread to the south of *C. nubica*'s range (see Snow 1978: maps 377, 378). The Knysna Woodpecker *Campethera notata* (Lichtenstein), 1823: